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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,737

05/08/2006

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EXAMINER

GROUP, KARL E

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

10/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/595,737

Applicant(s)

DOLE ET AL.

Examiner

Karl E. Group

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8-3-06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

Information Disclosure Statement

1. JP document 06-335456 drawn to a medical diagnosis system does not appear to be particularly relevant to the instant invention and therefore has been removed from the PTO1449. US document also does not appear to be particularly relevant to the instant application.
2. The Japanese documents cited have been considered only to the extent of the supplied abstracts. Complete documents were not filed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed particle sizes appear from the disclosure to be directed to the starting materials not the final sintered compact.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese document 1-122971.

The Japanese document teaches a sintered material including 10-80 vol% CBN, 7.5-80 vol% alumina, 1-5 vol % Aluminum boride, 3-20 vol% AlN and Ti,Zr, Hf borides, carbides and nitrides (see abstract). Examples 2-4 fall within the instant claims. Page 413 recites BN particles of 1 micron and alumina of 1-1.5 microns (first column, bottom paragraph). Furthermore the body is sintered at 1300-1600°C (second column, bottom paragraph). It would be expected that at least some of the components would coat the boron nitride particles since they are the binder. Claim 19, is considered a convention use of a wear resistant tool.

The claims are considered anticipated or in the alternative the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time of the invention to have selected the overlapping portion of the range disclosed by the prior art because overlapping ranges have been held to be a prima facie case of obvious, see *In re Malagari*, 182 U.S.P.Q 549.

8. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese document 60-176973.

The Japanese document teaches a sintered compact for a cutting tool including: 20-80% CBN (particle size less than 10 micron), 5-50% TiC, 10-70 alumina (less than .2 micron), 5-20 titanium aluminum nitride. See examples in the table on page 353. The body is sintered at 12-1500°C.

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It would be expected that at least some of the components would coat the boron nitride particles since they are the binder. Claim 19, is considered a convention use of a wear resistant tool.

The claims are considered anticipated or in the alternative the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time of the invention to have selected the overlapping portion of the range disclosed by the prior art because overlapping ranges have been held to be a prima facie case of obvious, see *In re Malagari*, 182 U.S.P.Q 549.

9. Claims 1-4,9-13,18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese document 56-112438.

See example 4, page 217. Processing parameters within the instant claims are recited in the abstract. The claims are considered anticipated.

10. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese document 6333540.

See examples at page 223, tables 1-3. The sintering pressure is 4-6 GPa and 1473-1873K.

The claims are considered anticipated or in the alternative the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time of the invention to have selected the overlapping portion of the range disclosed by the prior art because overlapping ranges have been held to be a prima facie case of obvious, see *In re Malagari*, 182 U.S.P.Q 549.

11. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese document 9-15771.

See example 1 and compositions of the tables that fall within the ranges of the instant claims.

The claims are considered anticipated or in the alternative the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time of the

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invention to have selected the overlapping portion of the range disclosed by the prior art because overlapping ranges have been held to be a prima facie case of obvious, see *In re Malagari*, 182 U.S.P.Q 549.


Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl E. Group whose telephone number is 571-272-1368. The examiner can normally be reached on M-F (6:30-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Karl E Group
Primary Examiner
Art Unit 1793

Keg
10-25-07